Ontario Energy Board

Ontario

IN THE MATTER OF THE
ONTARIO ENERGY BOARD ACT
AND
IN THE MATTER OF
THE MUNICIPAL FRANCHISE ACT
AND
IN THE MATTER OF
APPLICATIONS BY

THE CONSUMERS' GAS COMPANY LIMITED

FOR LEAVE TO CONSTRUCT A NATURAL GAS TRANSMISSION PIPELINE AND FOR CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY AND FRANCHISE APPROVAL IN THE TOWN OF DEEP RIVER AND TOWNSHIP OF ROLPH, BUCHANAN, WYLIE AND MCKAY.

E.B.L.O. 231; E.B.C. 193; E.B.C. 194
E.B.A. 591; E.B.A. 592

INTERIM DECISION WITH REASONS

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ONTARIO ENERGY BOARD

IN THE MATTER OF the Ontario Energy Board Act, R.S.O. 1980, c. 332, Sections 46 and 48, as amended;

AND IN THE MATTER OF an Application by The Consumers' Gas Company Ltd. to the Ontario Energy Board for an Order granting leave to construct a natural gas transmission pipeline in the Town of Deep River and the Township of Rolph, Buchanan, Wylie and McKay, in the County of Renfrew;

AND IN THE MATTER of the Municipal Franchises Act, R.S.O. 1980, c. 309, Sections 8 and 9;

AND IN THE MATTER OF Applications by The Consumers' Gas Company Ltd. for certificates of public convenience and necessity to construct works to supply gas and to supply gas to inhabitants of the Town of Deep River and to the Township of Rolph, Buchanan, Wylie and McKay, in the County of Renfrew;

AND IN THE MATTER OF the approval of proposed municipal franchise by-laws granting The Consumers' Gas Company Ltd. the right to construct works to supply and to supply gas to the inhabitants of the Town of Deep River and the Township of Rolph, Buchanan, Wylie and McKay, in the County of Renfrew.

BEFORE: R.M.R Higgin
Presiding Member

C.W.W. Darling
Member

R.R. Perdue, Q.C.
Member

INTERIM DECISION WITH REASONS

June 18, 1990

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TABLE OF CONTENTS

1. INTRODUCTION

1.1 Background

1.1.1 The Consumers' Gas Company Ltd. ("Consumers Gas", "the Company", or "the Applicant") is Ontario's largest natural gas distribution company serving over one million customers in southern and eastern areas of the province with natural gas received primarily from gas suppliers in western Canada and delivered mainly through the transmission systems of TransCanada PipeLines Limited ("TCPL") and of Union Gas Limited ("Union"). A main TCPL transmission pipeline runs down the Ottawa Valley within a few kilometres of the Town of Deep River ("the Town", or "Deep River").

1.1.2 Consumers Gas serves Petawawa, some 30 km to the southeast of Deep River, and ICG Utilities (Ontario) Ltd ("ICG") serves Mattawa, about 100 km to the northwest. Both Consumers Gas, in 1980, and ICG, in 1985, attempted to provide gas service to the Town, with financial aid from the

federal government under the Distribution System Expansion Program ("DSEP"). The 1980 DSEP application failed to qualify since available funds were allocated to more economically attractive projects. No award was made under the 1985 DSEP application, because of the phase-out of the program.

1.1.3 In 1986, Consumers Gas applied to the Ontario Energy Board ("the Board") for leave to construct facilities to supply gas to Deep River and to the adjacent Village of Chalk River, for a certificate of public convenience and necessity and for approval of the municipal franchise agreements. The applications were denied by the Board in its Decision dated September 5, 1986, under Board File Numbers E.B.L.O. 216, E.B.A. 396 and 478, and E.B.C. 171, 172 and 173.

1.1.4 In its Reasons for Decision, the Board found that the project did not meet the criteria used by the Board, at that time, to assess the economic viability of the project. The Board also found that the public interest aspects of the case, including the benefits natural gas would bring to the two communities, were not fully addressed by the evidence in the case. The Board called for a generic hearing to address issues that transcended the specific applications under consideration. These were related to the provision of gas service, with the DSEP

discontinued, to areas where such service is found to be marginally uneconomic.

1.1.5 In 1987, the Board conducted a generic review of the expansion of the natural gas system in Ontario under Board File No. E.B.O. 134. The Report of the Board dated June 1, 1987 states, with regard to the evaluation of system expansion projects, that:

> 6.72 ... The Board requires each utility to develop a three-stage process as outlined below to aid the Board in its determination of the public interest.
>
> 6.73 The first stage is a test based on a DCF (discounted cash flow) analysis.
>
> 6.74 The second stage should be designed to quantify other public interest factors not considered at stage one. All quantifiable other public interest information as to costs and benefits should be provided at this stage.
>
> 6.75 The third stage should take into account all other relevant public interest factors plus the results from stage one and stage two.
>
> 6.76 A project could, therefore, be accepted if it passed the DCF analysis of stage one and if the disadvantages and quantifiable costs from stages two and three do not disqualify it. If a project is not acceptable because it fails the DCF analysis or has significant other disadvantages, then stages two and three must be completed before the project can be said to be fully evaluated.

1.2 **The Applications**

1.2.1 Consumers Gas on October 11, 1989, applied to the Board, pursuant to the provisions of Sections 46 and 48 of the Ontario Energy Board Act ("the Act"), for an order granting leave to construct a NPS 4 transmission pipeline and related facilities to supply the Town of Deep River and the Township of Rolph, Buchanan, Wylie and McKay in Renfrew County ("the Application"). The following is a description of the proposed natural gas transmission pipeline and related facilities:

> The proposed pipeline will originate at the proposed Deep River Gate Station, located at TransCanada PipeLines Main Line Valve No. 1208 in Lot 5, Concession XV in the Township of Rolph, Buchanan, Wylie and McKay, in the County of Renfrew. The pipeline will extend east along the south side of Wylie Road before crossing to the north side immediately west of Hennessy Creek in Lot 2, Concession XV. The pipeline will then continue east along Wylie Road to Lot 2, Range "A". The pipeline will then cross to the east side of Highway 17 and will continue north to the proposed district station at the corner of Deep River Road and Highway 17 in the Town of Deep River, County of Renfrew.

The leave to construct application was given Board File Number E.B.L.O. 231.

1.2.2 Consumers Gas also filed two applications with the Board, dated October 11, 1989, pursuant to

Section 8 of the Municipal Franchises Act requesting Certificates of Public Convenience and Necessity to construct works and supply gas to the Township of Rolph, Buchanan, Wylie and McKay and to the Town of Deep River ("the Certificate Applications"). The Certificate Applications were given Board File Numbers E.B.C. 193 and E.B.C. 194 respectively.

1.2.3 Also on October 11, 1989, Consumers Gas filed two applications, pursuant to Section 9 of the Municipal Franchises Act, requesting orders approving natural gas franchise agreements granted by the Town of Deep River and by the Township of Rolph, Buchanan, Wylie and McKay ("the Franchise Applications"). The Company requested that the assent of the municipal electors be dispensed with in both cases. The Franchise Applications were given Board File Numbers E.B.A. 591 and E.B.A. 592 respectively.

1.2.4 The proposed transmission pipeline would be approximately 3.6 km in length, between a gate station at the TCPL pipeline and a district station in the Town of Deep River. The project's estimated initial cost of $1,101,600 includes the installation of some 14 km of plastic distribution mains within the Town, as well as the services to be installed in the first year. A map of the Town showing the District Station and the distribution mains is shown as Figure 1.

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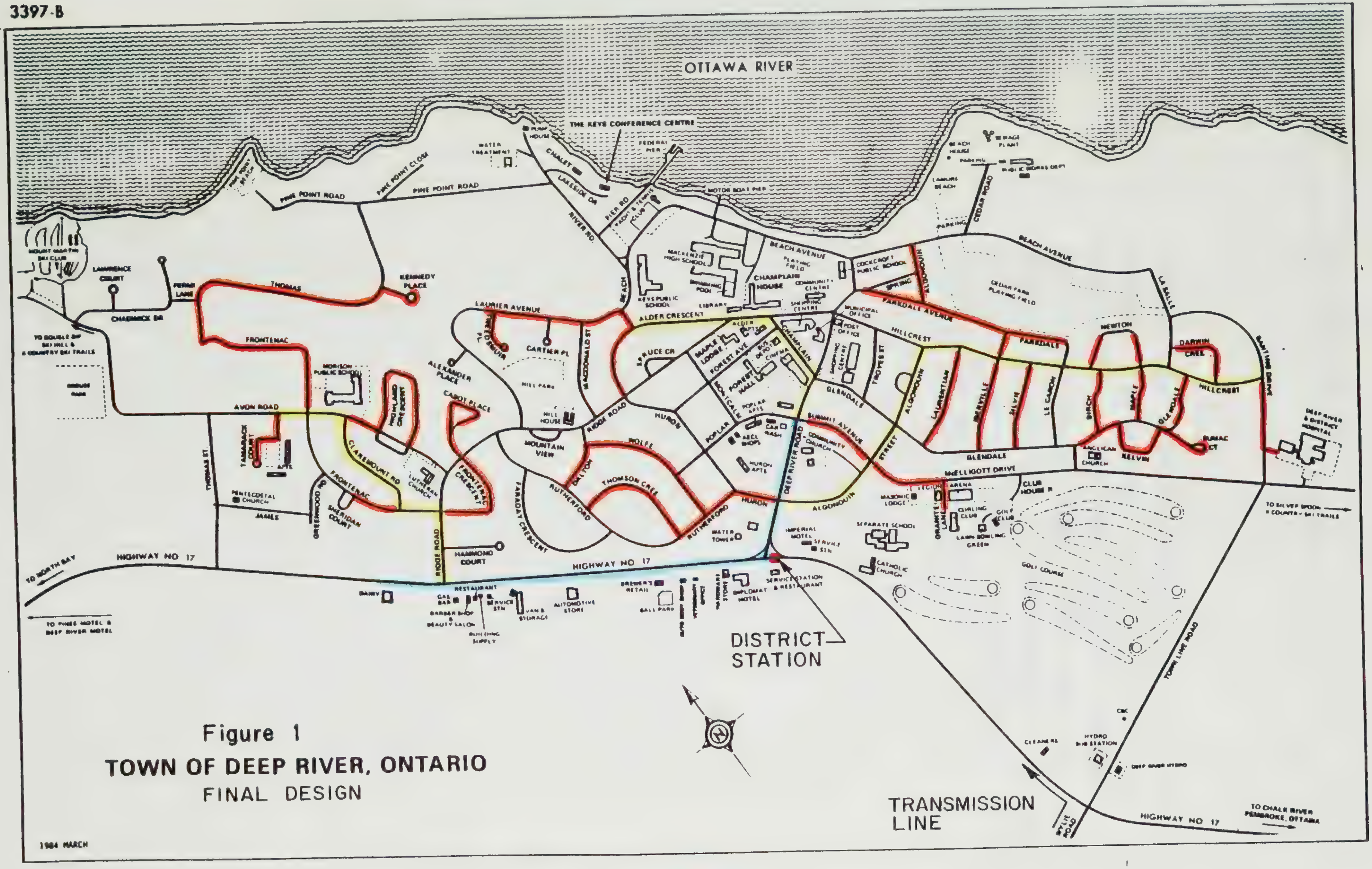

Figure 1
TOWN OF DEEP RIVER, ONTARIO
FINAL DESIGN

NPS. 4 PE. 1550m
NPS. 2 PE. 3330m
NPS. 1¼ PE. 9470m

1.2.5 Unlike the previous application in 1986 under Board File Number E.B.L.O. 216, the present Application does not include service to the Village of Chalk River. Consumers Gas indicated that the results of its economic feasibility analysis did not justify an application to serve Chalk River at this time.

2. THE HEARING

2.1 Notices and Procedural Matters

2.1.1 The Board issued its Notice of Applications on October 31, 1989, in which it notified interested parties how to intervene and how to apply for funding under the Intervenor Funding Project Act, 1988, S.O. 1988, c. 71.

2.1.2 Procedural Order No. 1 was issued on February 9, 1990, giving direction for filing of interrogatories and intervenor evidence. Since no request for intervenor funding was received, the Board issued a Notice of Hearing on April 17, 1990, which established April 26, 1990, as the date for commencement of the hearing.

2.1.3 The Board received a Notice of Intervention and a Notice of Motion dated April 20, 1990, from Union. In its Notice of Motion, Union requested late intervenor status and stated it was unaware of the Application until a telephone conversation with Board Staff on April 6, 1990, but wished to participate in order to monitor the proceedings and perhaps to file argument.

2.1.4 Board Staff opposed Union's motion on the grounds that Union had provided insufficient detail regarding its reasons for intervention. In granting late intervenor status to Union, the Board noted that there is greater onus on gas utilities than other intervenors to monitor the Board's notices. Also there is onus on all intervenors to have regard to the criteria for intervention set out in the Board's Draft Rules of Practice and Procedure, and to be more complete in setting forth the nature of their intervention.

2.2 **Appearances**

2.2.1 The following parties were represented by Counsel:

Consumers Gas	Peter Atkinson
Board Staff	Kenneth Rosenberg
Union	Douglas Sulman

2.2.2 Other parties were represented as follows:

ICG	Robert Bell

2.3 **Witnesses**

2.3.1 The Applicant called the following witnesses:

a) Consumers Gas Personnel:

John W. Bayko	Regional Operations Manager, Eastern Region
Laura L. Holmes	Manager, Planning and Technical Services, Eastern Region
James D. Nubel	Regional Sales Manager, Eastern Region
Harold Townsend	Regional Manager, Eastern Region
Keith A. Walker	Vice-President, Regulatory Affairs
Ann C. Wilson	Manager, Financial Studies

b) Others:

James E. Hunton	Vice-President, The Green Galloway Group Inc.
Lyall V. Smith	Mayor, Town of Deep River
John C. Evans	Associate Professor, Department of Economics, York University
Marie J. Zukowski	Associate, Econanalysis and Associates

2.4 The hearing took place on April 26 and 27, 1990 with oral argument on May 1, 1990. A copy of all exhibits and a verbatim transcript of the hearing are available for review at the Board's offices.

3. EVIDENCE AND ISSUES

3.1 Justification for the Project

3.1.1 The Mayor of Deep River, appearing in support of the Application, stated that residents had watched the construction of the TCPL transmission pipeline "less than a mile from our door" and were frustrated at being without gas service after some ten years of attempts.

3.1.2 Mayor Smith, who is also a member of The Hydro-Electric Commission of the Town of Deep River, testified that the Town has the highest unit electricity cost in Ontario Hydro's ("Hydro") Eastern Region. The high cost is primarily a result of a poor load factor caused by a high level of electrically heated buildings in an area with extremely cold winters. The Mayor stated that gas would be a welcome alternative to electricity, and would confer benefits to all of the Town's electricity users by spreading the peak electrical load, improving the load factor and reducing the rates charged by Ontario Hydro.

3.1.3 The Mayor filed a paper describing an electricity load management project undertaken by Deep River Hydro at an initial capital cost in excess of $100,000. Ontario Hydro supported the program by approving discounts for participating customers amounting to $10,000 in the first few months of the project. These contributions were expected to increase to $44,000 for the full year. Through savings in the Town's wholesale cost of power, the system capital cost was expected to be recovered in a year. The Town had not considered other alternatives to improve load factor such as individual or commercial ground source heat pumps or a town-wide system to use water from the Ottawa River for heating and cooling.

3.1.4 The population of the Town has declined some 25 percent since its peak in the mid 1970s. Mayor Smith outlined the factors that he felt should promote growth in the area including gas service. Consumers Gas is projecting 30 new residences in the next 20 years in the area to be served by the proposed project.

3.1.5 The Applicant, in 1988, conducted a survey of 51 percent of the 1319 residential properties, and 76 percent of the 45 commercial properties in the Town to determine the fuel now being used, as well as the type and vintage of heating equipment. Residential heating is equally split between oil and electricity, with about 20 percent of homes equipped with electric baseboard

heating, which cannot readily be converted to gas. Only 13 percent of the commercial properties used electric baseboard heating. Electricity is the dominant energy source for water heating in both sectors.

3.1.6 Consumers Gas testified that major savings would occur through conversion to gas. A typical customer would save an estimated 40 percent of a $1,300 annual oil bill, or 48 percent of a $1,500 annual electricity bill, or 62 percent of a $2,100 annual propane bill. In the Company's economic analysis, all conversions were assumed to be from oil, the lowest cost alternative to gas.

3.1.7 The Company forecast the annual customer additions for Deep River based on its experience with similar projects in the region. The Company projected conversions of 37 percent and 67 percent of the potential residential and commercial markets respectively in the fifth year, and 60 percent and 82 percent respectively in the twentieth year.

3.1.8 The Company stated that the data from the survey regarding the interest of residents in converting to gas was not used in making the projections of customer additions used in its analysis, but only to support and confirm those projections. Survey results showed 57 percent of residences and 68

percent of commercial owners indicated an interest in converting to gas.

3.1.9 The Company presented data on historical customer additions compared to forecasts made when similar projects were proposed. Results were variable, but the Company expressed satisfaction with the forecasting process.

3.1.10 Board Staff argued that the forecast customer additions were suspect because of inconsistencies in the survey results, and because the survey itself indicated a low interest in the Town in converting to gas. The Company reiterated its heavier reliance on judgement and experience, rather than on the results of surveys taken before gas service becomes available.

3.1.11 The Company stated that the individual customer annual volumes were held constant for the life of the numerical analysis. Reductions in average commercial volumes were attributed by the Company to additions of smaller customers in later years. The Company explained that conservation measures are largely in place in Deep River, and that the mix of efficiencies of gas furnaces installed in the region has remained constant in recent years, at the levels in place in Ottawa. These data were used in forecasting average consumption volumes in the Town.

3.1.12 Board Staff questioned the need for the capacity of a NPS 4 transmission pipeline from the TCPL gate station to the Town district station, which provides capacity well in excess of the twenty year forecast volumes. The Company explained that although a NPS 3 pipeline would be a closer match, the savings would be small, and equipment for installation and maintenance for this size is not available in its Eastern region. NPS 2 pipe could be used, but this would provide only marginal spare volume capacity in later years.

3.2 Economic Feasibility Analysis

3.2.1 In support of its Application for leave to construct the Deep River transmission line and associated facilities, the Company filed a two stage economic analysis based on the Board's Report in E.B.O. 134.

3.2.2 The stage one analysis used a 20 year DCF cash flow methodology. The specific assumptions included a commercial customer retention horizon of 25 years, a residential customer retention horizon of 55 years, a total project life of 75 years and a discount rate of 8.86 percent, equivalent to the Company's after-tax weighted incremental cost of capital.

3.2.3 The results of the stage one analysis are shown in Table 1, expressed in terms of both initial capital cost and the net present value ("NPV") of

the project cash flows. The result indicates that the project recovers only $450,000 in revenues for a capital expenditure of almost $1.2 million. This corresponds to a benefit to cost ratio of 0.38. The Company stated unequivocally that the project was not feasible from a utility cash flow point of view.

3.2.4 The Company undertook a stage two analysis with the assistance of Dr. Evans and Ms Zukowski. The methodology employed was similar to that presented most recently in support of the Company's application for its Georgian Bay Extension Case under Board File Number E.B.L.O. 223. The stage two analysis, summarized in Table 2, demonstrated that the NPV of stage two benefits as calculated was $882,000. The Company indicated that these benefits offset the negative stage one utility cash flow, resulting in a positive total stage one and stage two NPV of $144,100 (adding stage one and stage two benefits).

3.2.5 The stage two calculations indicated that the utility would benefit somewhat from tax externalities ($139,600) and that the largest stage two benefit was fuel savings to the residents of Deep River. This amounted to $1,730,400 gross and when netted against tax

Table 1

Deep River Project Stage 1 NPV Analysis ($000's)
DCF Cash Flow Analysis

	Year 1	Years 2-20	Total	
A Capital Investment*				
Service Mains	522.943			
Supply Mains	303.535			
Services	165.922			
Stations	109.200			
Total Capital Investment	1101.599			
Working Capital	1.807			
Total Capital Invested	1103.406			
B Present Value of Capital Investment at year of Addition**				
Investment	1075.901			
Working Capital	1.537			
CCA Tax Shield	152.017			
C Net Investment PV at Start of Project	912.420	276.287	1188.707	
D Revenues (Current $)				NPV of Project: **-738.221**
Gross Revenue	199.291			Benefit to Cost Ratio:
Gas Cost	(150.372)			450.486 / 1188.707 = 0.38
O & M & tax	(26.872)			
Net Revenue Before Tax	22.047			
Net Revenue After Tax	12.271			
PV of Revenues at Start of Project	128.006	322.480	450.486	

* Initial capital investment only, in current dollars
** Present value of initial capital investment, working capital and tax shield

Table 2

Summary of Stage 2 NPV Analysis
Net Present Value of Externalities and Net Benefit (Cost)

Stakeholder	NPV Externalities	Net Benefit (Cost)
1. Gas Utility & Existing Customers		
NPV Tax Externality	371.6	
Difference due to Discount Rate	-199.8	
NPV Labour Externality	86.7	
Foreign Exchange Externality	-118.9	
	139.6	139.6
2. New Gas Customers - Deep River		
NPV Fuel Savings	1730.4	
Difference due to Discount Rate	-983.7	
NPV Tax Externality	21.5	
	768.2	768.2
3. Fuel Oil Suppliers		
NPV of Lost Sales	-222.7	
NPV Tax Externality	- 66.0	
NPV Foreign Exchange	192.3	
NPV Labour	- 20.4	
Difference due to Discount Rate	91.3	
	- 25.5	(25.5)
NPV Total Externalities		**882.3**

externalities and the social discount rate to project discount rate ratio, gave a net benefit figure of $768,200 (NPV). Fuel oil suppliers to the community would experience a net loss of $25,500 (NPV basis).

3.2.6 The Company claimed that the results of the economic analysis showed the Deep River project to be feasible when considered in the framework of the broader public interest.

3.2.7 Consumers Gas submitted that E.B.O. 134 was the key to the Board's decision on the Deep River Application. It cited a number of paragraphs from that Decision, regarding undue burden.

3.2.8 The Company submitted that undue burden was an important principle and pointed out that the contribution required for the Deep River project from each existing customer was 8.8 cents per annum which it claimed was 'de minimis' and the burden was therefore not undue.

3.2.9 The Company submitted that the Board ought not to place too much weight on the (stage one) economic feasibility evidence because of E.B.O. 134, which, in its submission, makes it clear that economic feasibility is not the sole criterion examined by the Board.

3.2.10 Consumers Gas argued that the Board's policy is to permit subsidizations of municipalities like

Deep River provided that the subsidization does not place an undue burden on any individual group or class of customer.

3.2.11 The Company argued that the requirement for a contribution in aid of construction as set out in E.B.O. 134 was inapplicable in this case because there was no undue burden.

3.2.12 The Company cited a number of previous cases involving system expansion projects which were uneconomic based on stage one feasibility analysis but, nonetheless, had been approved by the Board. It also noted that its application for a franchise in Wasaga Beach had been granted, even though the project was not economically feasible based on a stage one DCF analysis of utility cash flows.

3.2.13 In summary, the Company submitted that the Board ought to make a factual determination as to whether the Deep River project imposed an undue burden on existing customers. It argued the evidence established that there could not be an undue burden on existing customers since the project was so small and had a virtually meaningless effect in the scheme of things. Accordingly, it argued, the application should be approved.

3.2.14 Board Staff at the outset of the hearing stated they were opposed to the Application on the

grounds that, based on the economic analysis provided by the Company, the project does not meet the Board's test for feasibility. It would, therefore in Board Staff's view, be unfair for the existing customers of Consumers Gas to bear the costs.

3.2.15 Board Staff criticized the Company's methodology and the assumptions used in its economic analysis in support of the Application. In particular Staff contended that a time horizon of 75 years was unrealistic and considerably longer than that used by other gas utilities in similar cases. It was submitted that the maximum time horizon should be 30 years because the analysis is a financial one and not one of customer retention. If more realistic time frame and customer retention assumptions had been used, the benefit to cost ratio would have been even lower. For example, using a residential customer retention period of 20 years would reduce the benefit to cost ratio to 0.33.

3.2.16 Board Staff also felt that the discount rate was understated since the weighted average cost of capital corresponding to the project discount rate excluded short-term debt. Using the Board's most recently approved cost of capital of 9.1 percent, the benefit to cost ratio would decrease to about 0.37.

3.2.17 Board Staff also expressed concern about the lack of compatible and comparable analysis methodology among utilities and suggested that this generic problem be examined if the Board holds a hearing on least cost utility planning.

3.2.18 Board Staff submitted that the framework used in the stage two analysis was too broad in that it analysed benefits from a Canadian perspective and not the Ontario perspective, which better corresponded to the jurisdiction of the Board. Futhermore there was a mismatching of costs and benefits since all costs impacted on the utility's existing customer base in Ontario, while some of the benefits were external to the province.

3.2.19 Board Staff submitted that, in any event, stage two benefits and costs should be treated separately to stage one costs and benefits and should not be accumulated on a dollar for dollar basis with stage one. The numbers in stage one analysis are more reliable and front-ended, whereas the numbers in stage two analysis are subjective and swamped by assumptions which are speculative at best.

3.2.20 On the issue of subsidy, Board Staff disagreed with the Company's proposition that this matter was an issue to be addressed in a main rate case and that undue burden, expressed in cents per cubic meter of gas, was the appropriate criterion

for the Board to use as a basis for its decision on the Application. In the opinion of Board Staff the question of undue burden does not relate to the entire rate base of Consumers Gas but to the specific benefit to cost ratio of the project.

3.3 **Potential Grant in Aid**

3.3.1 Board Staff submitted that an $821,500 grant in aid of construction or some equivalent contribution was required to avoid the subsidy from the Company's existing ratepayers. Staff noted that there were several alternative ways to finance the shortfall but that neither the Company nor the Town had seriously considered these.

3.3.2 Board Staff pointed out that Mayor Smith had not approached the provincial government for assistance and submitted that a formal application for a grant in aid of construction should be made.

3.3.3 Because the benefits in fuel savings which would accrue to the new customers in Deep River, Board Staff submitted that the new customers themselves should make a contribution or that the Town should form its own public gas utility. If the new customers were to finance the complete shortfall of $821,500, this would cost about $1,500 per home and $3,000 per commercial

customer based on the Company's forecast of customer additions. This contribution it argued, was not unreasonable given the minimum fuel savings of $526 expected each year for residential customers converting from oil.

3.3.4 Board Staff also suggested that the shareholders of Consumers Gas could contribute the necessary grant in aid of construction. If the Company's shareholders were to contribute the shortfall the subsidy required was only 2.5 cents per common share on a one-time basis, compared to 8.8 cents per annum subsidy from each existing residential customer of Consumers Gas.

3.3.5 Mayor Smith testified that the Town had not recently approached either the federal or the provincial government for financial assistance and, in light of the Town's contributions to Ontario he regarded the suggestions that the Town pay a grant in aid of construction or form its own gas distribution utility as "offensive".

3.3.6 The Mayor also testified that he was indifferent as to whether the customers or the shareholders of Consumers Gas paid for any construction shortfall.

3.4 **Franchises and Certificates**

3.4.1 All parties to the Application agreed that if leave to construct the pipeline was denied, the

Company's request for franchise approval and a certificate of public convenience and necessity would also fail.

3.5 **Construction Program**

There were no issues related to the construction program.

3.6 **Environmental Matters**

3.6.1 The Applicant submitted the same environmental report which it had prepared in 1986 for the E.B.L.O. 216 hearing. Its witnesses testified that the evidence in regard to the Deep River portion of that report was unchanged and that it had received the approval of the Ontario Pipeline Coordinating Committee prior to that hearing.

3.6.2 The report concluded that there were no long term environmental effects expected as a result of the installation of the pipeline and that the route selected had no environmentally sensitive areas or water crossings since it was within the previously disturbed road allowance.

3.7 **Conditions of Approval**

3.7.1 Board Staff presented a list of conditions of approval which, it submitted, should form part of any Board order approving the Application. Consumers Gas agreed to these conditions without amendment.

4. BOARD FINDINGS

4.1 Justification for the Project

4.1.1 The Board recognizes that interest in the supply of natural gas to the Town of Deep River is high among the residents, businesses and civic authorities in the Town, and that frustration has resulted from unsuccessful prior attempts to obtain supply.

4.1.2 The Board agrees that the availability of gas would be a significant economic benefit to the residential and commercial property owners who would receive service, with the resulting cost savings benefiting the community as a whole. The evidence is not as clear, however, that gas service to the Town would be a significant factor in achieving civic goals such as overall growth in the community.

4.1.3 The Board notes that, although the Town has made significant efforts to reduce electricity costs through financial support of an electricity load

control system, it has not apparently seriously examined options to assist in the securing of gas service or developing other alternative heating systems.

4.1.4 The Board notes that a lack of significant new residential subdivision construction makes the distribution portion of the project essentially one of conversion of existing residences and commercial buildings. Such conversions tend to be more spread out on the distribution system.

4.1.5 The Board accepts the Company's projected rate of growth of residential and commercial customer additions. However the Board disagrees with the Company's use of constant annual customer consumption volumes over the life of the analysis, with no allowance for reduced consumption through conservation and more efficient equipment. However, the impact on the numerical analyses in this case may not be significant.

4.1.6 The Board agrees with the Applicant that NPS 4 is the appropriate size of high pressure transmission pipeline to serve the Town, given the evidence on alternative sizes.

4.2 Economic Feasibility

General Considerations - E.B.O. 134

4.2.1 A number of system expansion projects have been reviewed by the Board in recent years. In some cases the Board has found that a certain level of subsidy from existing ratepayers can be justified based on broader public interest considerations.

4.2.2 In the examination of system expansion projects a benefit to cost ratio of unity in stage one feasibility, as defined in E.B.O. 134, has been useful as a point of departure, being equivalent to a prudent utility investment requiring no subsidy from existing ratepayers.

4.2.3 The Board notes that several system expansion projects with benefit to cost ratios of between 0.63 and 1.0 from stage one analysis have been approved. In these cases the Board, in reaching its decision, has placed reliance on a stage two analysis as outlined in E.B.O. 134.

4.2.4 Consumers Gas, in the present case, expressed the view that the benefit to cost ratio may not be the best indicator of project economics and suggested that the NPV of cash flows was a better indicator.

4.2.5 The Board agrees with the Company in this case that the NPV of project cash flows is a better

indicator and that the NPV of the shortfall (if any) between the discounted value of the capital investment and the discounted value of the project revenues provides additional information on the project economics resulting from stage one DCF analysis. The Internal Rate of Return of the project could equally well be used as an indicator of economic viability.

Marginal Projects

4.2.6 One of the questions arising from the E.B.O. 134 Report is the basis upon which projects should be judged marginal and how such projects should then be treated, including the use of stage two analysis. Each case within the Company's franchise area is different and successive Board panels have reached different findings on this question.

4.2.7 In the Board's opinion, in general, a system expansion project which demonstrates that the expected revenues recover over 75 percent (but less than 100 percent) of the invested capital (NPV basis) may be considered marginal.

4.2.8 However, in the Board's view, if a project recovers less than 75 percent of the NPV of invested capital from revenues it cannot even be considered marginal and can only be justified if other very significant public interest factors

offset the required subsidy from the Company's ratepayers.

4.2.9 Equally, in the Board's view, if a system expansion project fails to recover at least half of the NPV of invested capital it cannot likely be justified for inclusion in rate base even if there are significant public interest considerations in its favour.

4.2.10 The Board has a responsibility to ensure that there is a fair allocation of the costs and benefits of the Company's regulated utility operations between the ratepayers and the shareholders of the utility, and that the ratepayers are not asked to subsidize investments by the utility which are not financially and economically sound, while on the other hand the shareholders receive a benefit from these investments.

4.2.11 The Board does not accept Consumers Gas' proposition that the only question in reaching a decision to allow a certain level of subsidy in a capital project, is undue burden brought to a 'de minimis' level, by spreading the subsidy over its more than one million customers. Rather, it believes another important consideration to be the question of what level of subsidy for the project under review is fair and reasonable for the existing ratepayers to assume, given the

broader public interest factors associated with the project.

4.2.12 The Board also does not accept Consumers Gas' proposition that the level of cost to be incurred by the utility is purely a rates case issue. While rate base determination is the responsibility of a rates case panel, the issues of fairness and undue subsidy are matters bearing on the granting of the certificates, and of the leave to construct which are before the Board in this case.

4.2.13 The Board accordingly when considering an application such as Deep River, if cost and economic feasibility are the major issues, must draw the line at the point where it feels it is fair for ratepayers to bear the costs of the project, having taken into account, as much as is reasonable, the broader public interest.

4.2.14 It is then up to the Company to consider its position and to make a decision whether to proceed with the project expenditure knowing the grant in aid required or the level of costs that the Board has determined to be fair and reasonable to incur for the account of existing utility ratepayers.

4.2.15 The E.B.O. 134 Report sets out an analysis framework designed to assist the Company in determining those capital projects for which it

should make application, and the Board in reaching its decision on such applications. The stage one analysis framework, set out in E.B.O. 134, is clear and is based on widely accepted methodology for project investment analysis. However, the Board notes that the stage two analysis framework was not specified in detail in E.B.O. 134 and the current methodology employed by Consumers Gas has evolved over several cases.

4.2.16 As employed in this case, the Company's stage one analysis is based on certain questionable assumptions and, in the Board's view, the stage two analysis includes factors outside the statutory jurisdiction and reasonable bounds of consideration of the Board on an equal basis to those which are within the scope of the public interest which the Board has set out in previous cases.

4.2.17 The Board also notes that there is no consistent set of assumptions used by all three gas utilities in carrying out stage one and two economic analyses. Any changes to these feasibility guidelines is a matter to be addressed in each utility's future rate cases and not in this Decision.

4.2.18 It is quite clear from the E.B.O. 134 Report that stage two analysis is intended to quantify public interest benefits which bear on the Board's

decision concerning the justifiable level of subsidy which would be fair to the Company's ratepayers for marginal projects. A stage two study can be of assistance in this regard, only if it sufficiently delineates the various public interest considerations and does not merely aggregate these to a level of meaningless generality.

Specific Considerations

4.2.19 The Board finds that the expenditure of $1.2 million (NPV) by Consumers Gas for the Deep River expansion project would not be a prudent capital budgeting decision for the regulated utility, since the Company's analysis shows that the project revenues recover less than 40 percent of the invested funds. Given the revenues expected from the project, the stage one analysis would indicate that a maximum expenditure of $450,000 would be financially prudent and that any additional investment beyond this amount, will require a subsidy from the existing ratepayers of Consumers Gas.

4.2.20 The Board also notes that the project revenues fail to recover even the costs of local distribution mains and services in the Town of Deep River. The Company's policy, as filed in this case, is to require that revenues cover such service costs for infill local service projects in its present franchise area. It is

inconsistent, in the Board's view, that the Company apparently does not require this as a minimum basis for bringing forward system expansion projects.

4.2.21 The Board believes that the issue of what, if any, additional contribution for the Deep River Project should reasonably be allowed from existing ratepayers, can be addressed by considering other Board decisions regarding system expansion projects, the secondary benefits associated with the Deep River project and other public interest factors.

4.2.22 The stage two analysis clearly demonstrates that the largest beneficiary of the proposed project is the community of Deep River and, in particular, those residents who would receive natural gas service. The fuel savings are estimated to be $1.73 million. After netting out the tax externality and adjusting for the social discount factor the corresponding stage 2 benefit is estimated to have a net present value of $768,200. The capital investment by, and increased disposable income of, these new gas customers will have also secondary effects on the local economy. Reduced program expenditures and increased tax revenues for the federal and provincial governments can also be expected to occur. These latter benefits are in the broader public interest.

4.2.23 The Board considers that the broader public interest is also enhanced by the reduced environmental impact resulting from residents of Deep River switching from oil to gas using modern up-to-date gas heating equipment. The Company's analysis did not estimate this reduction in emissions, or assign this an economic benefit.

4.2.24 In the Board's view there may also be indirect benefits to the electrical system in the Province. Conversion from electric space and water heating would reduce the local utility's peak demand and improve its poor load factor. This may have two beneficial effects:

a) moderating (in relative terms) the local electricity rates from being one of the highest in the south of the province to being more in line with other communities. This would benefit all electricity users in the Deep River Hydro service area; and

b) possibly reducing the need for Ontario Hydro to install new electrical capacity by providing load displacement and a small improvement in load factor for the Hydro system. Hydro has recognized the value of such load displacement within its long range system plan. However, the long-term system value may appropriately be reflected in the reduced charges to Deep River Hydro arising from an improvement in its load factor.

4.2.25 The Board has previously noted the need for a fair and reasonable apportionment of project costs and the difficulties it has with the broad brush approach taken by the Company in its stage two analysis. The approach taken failed to meet adequately the Board's needs to delineate the particular public interest constituencies affected by the Deep River project and the costs and benefits to these. The Board is also firmly of the view that the NPV resulting from the broad economic analysis in stage two should not be mathematically added to the NPV resulting from the capital budget DCF investment analysis undertaken by the Company in its stage one analysis.

4.2.26 It is obvious to the Board that the community feels deeply about the subject of gas service. The high energy bills for electric or oil heating can only seem more frustrating when one sees a major gas transmission line as close as the TCPL line. Insofar as it is statutorily permitted, the Board has taken these concerns into account.

4.2.27 However, it is also clear that a sizeable financial contribution is needed to bring gas to Deep River.

4.2.28 The Board is not prepared to burden the customers of Consumers Gas with all the costs involved in making this Application financially feasible while all the benefits accrue to new gas

customers in Deep River and to the shareholders of Consumers Gas. However, it also does not wish to close the door on gas service to Deep River by denying the Application.

4.2.29 Given the lack of delineation and quantification of the public interest benefits in this case, the Board has had some difficulty in quantitatively assessing a level of subsidy which would be fair for the existing ratepayers of Consumers Gas to assume.

4.2.30 The Board notes the clear need of Deep River for gas service and understands the frustration expressed by the Mayor resulting from 10 years of attempts to secure gas service. It also accepts that there are benefits to the local economy, environment and the electricity system in the province. After considerable weighing of the evidence the Board finds that a subsidy of up to 30 percent of the initial capital cost or $350,000 would be fair and reasonable for the Company's existing ratepayers to provide, in this case, given the history and particular circumstances of the Application for gas supply to the Town of Deep River.

4.2.31 The Board accordingly finds that the total capital investment which it would be reasonable for the utility to incur, for the account of the existing ratepayers of Consumers Gas, is $800,000. A financial contribution of at least

$400,000 would have to be found to bring the project to a benefit to cost ratio of about 0.7 before the subsidy from existing ratepayers is taken into account.

4.2.32 Due to lack of investigation by the Company of a contribution or grant in aid of construction, or other sources of financing such as special rates, and the opposition of the Mayor to such considerations, the Board finds that it cannot specify the source or form of such a financial contribution based on the evidence to date in this case.

4.2.33 The Board accordingly will not render a final decision on the Applications at this time, in order to permit Consumers Gas and the Town of Deep River to investigate forthwith options to provide the financial contribution the Board deems necessary to make the project viable.

4.2.34 Having investigated options for a financial contribution, the Company may make application to reconvene the hearing to present new evidence on this matter.

4.2.35 Should Consumers Gas fail to make application to reconvene the hearing prior to December 31, 1990 the Board, in accordance with the provisions of Sections 15 and 30 of the Act, on its own motion, will reconvene the hearing and render a final decision on the Applications.

4.2.36 The Board directs the Company to exclude any allowance for the Deep River project from its utility rate base, until a final decision on the Applications.

5. COSTS AND COMPLETION OF THE PROCEEDINGS

5.1 **Costs**

5.1.1 No party applied for an award of costs in this proceeding. The Board's costs to date will be paid by Consumers Gas upon receipt of the Board's Cost Order and invoices.

5.2 **Completion of the Proceedings**

5.2.1 The Board hereby provides its Interim Decision on the Applications under Board file numbers E.B.L.O. 231, E.B.C. 193, 194 and E.B.A. 591, 592.

ISSUED at Toronto this 18th day of June, 1990.

R.M.R. Higgin
Presiding Member

C.W.W. Darling
Member

R.R. Perdue, Q.C.
Member